

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: <div style="text-align: center; margin-top: 20px;">See Form PCT/ISA/220</div>		<div style="text-align: center; margin-top: 20px;">Date of mailing (day/month/year)</div>	
Applicant's or agent's file reference see Form PCT/ISA/220		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/EP2004/050455	International filing date (day/month/year) 06/04/2004	Priority date (day/month/year) 11/04/2003	
International Patent Classification (IPC) or both national classification and IPC G01N27/419, G01N27/406			
Applicant ROBERT BOSCH GMBH			

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/	Authorized officer
Facsimile No.	Telephone No.

EU 3313 78348 US

WRITTEN OPINION OF THE
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International application No.
PCT/EP2004/050455

Box No. II Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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International application No.
PCT/EP2004/050455

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	_____	YES
	Claims	1-10	NO
Inventive step (IS)	Claims	_____	YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims	_____	NO

2. Citations and explanations:

See Supplementary Page

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY
(SUPPLEMENTARY PAGE)

International Application No. PCT/EP04/50455

Re Point V

Reasoned statement with regard to novelty, inventive step,
and industrial applicability; citations and explanations
supporting this statement

Reference is made to the following documents:

D1: WO-A-02/079769

D2: US-A-2002/0157452

D3: EP-A-O 427 958

D4: US-A-5 632 883

The present application does not satisfy the requirements of Article 33(1) PCT, because the subject matter of Claim 1 is not novel within the meaning of Article 33(2) PCT.

Claim 1 defines a device for operating a gas sensor. Although a gas sensor is described in Claim 1, the scope of protection of Claim 1 does not identify the gas sensor. All the technical features of the device of Claim 1 are therefore in the characterizing portion of the claim.

Document D1 discloses a device for operating a gas sensor, which has:

a constant current source for providing the pump current, which is adjustable to at least two amounts of the pump current (page 10, lines 24-26. In the exemplary embodiment of the patent application, a

switchover is made between two voltage values, exactly as in D1).

Therefore, Claim 1 is not novel relative to D1.

Document D2 also discloses a source which is adjustable to at least two amounts of the pump current (page 2, paragraph 0022: "The circuit shown in FIG. 3 ... between the electrodes."). Claim 1 is therefore not novel relative to D2.

A constant current source is provided for making a pump current available, which is adjustable to at least two amounts of the pump current, is disclosed in D3 (see page 5, lines 21-22 and Figure 1).

A device for operating a gas sensor, which has a constant current source that allows for an alternating operation having ON phases and OFF phases, is known from document D4 (see Figure and column 2, line 47 - column 3, line 2). Therefore, Claim 1 is not novel relative to D4.

The dependent Claims 2-10 do not include any features that, in combination with the features of any claim to which they relate, satisfy the requirements of the PCT with regard to novelty and inventive step, respectively:

Claim 2	see D3, page 5, lines 20-21;
Claim 3	does not seem to define any additional technical feature of the device;
Claim 4	see Claim 3;
Claim 5	appears to be part of a method;

Claim 6 see D2, Fig. 3; D3, page 5, lines 20-33;

Claim 7 see D2, Fig. 1;

Claim 8 see D2, paragraph 0015;

Claim 9 cannot be regarded as inventive;

Claim 10 D3, page 2, lines 1-4.